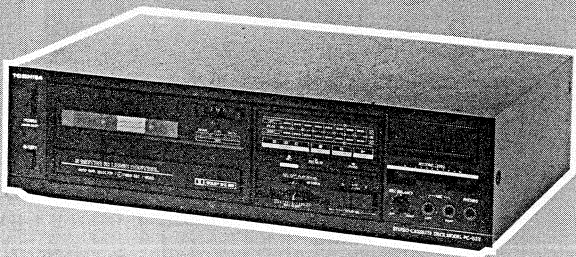


TOSHIBA

STEREO CASSETTE DECK

PC-G33



PC-G33 is available in two colors, silver and black.

SPECIFICATIONS

Heads:	Record/Playback AP head Erase AF (2-gap ferrite) head	Distortion (3rd):	0.8% (400 Hz, 0 dB chrome position tape)
Drive System:	2-motor IC logic control	Bias Frequency:	85 kHz
Motors:	DC servo motor for capstan drive DC motor for reel drive	Input Terminals:	MIC: 0.7 mV (600 ohm – 10k ohm) LINE: 70 mV (50k ohm)
Tape Speed:	4.8 cm/sec.	Output Terminals:	LINE: 360 mV (3k ohm) Headphone: 0.1 mW (8 ohm)
Wow & Flutter:	0.045% W. RMS	Power Supply:	AC 120V, 50/60 Hz (TA, TC) AC 220V, 50 Hz (TE, FR) AC 240V, 50 Hz (TU, AY)
Fast Forward and Rewind Time:	Approx. 80 sec. (C-60 tape)	Major Dimensions:	420 (W) x 112 (H) x 272 (D) mm (including front panel knobs etc. and rubber supports)
Frequency Response:	20 – 18000 Hz with metal tape and –20 dB input 20 – 16000 Hz with chrome tape and –20 dB input 20 – 15000 Hz with normal tape and –20 dB input	Weight:	3.8 kg
SN Ratio:	56 dB (peak level, WTD, chrome position tape)		

Specifications are subject to change without notice.

TA, TC, TE, TU, FR, AY

PRINTED IN JAPAN 22905313 June, 1984 (S)

1. OPERATING CONTROLS

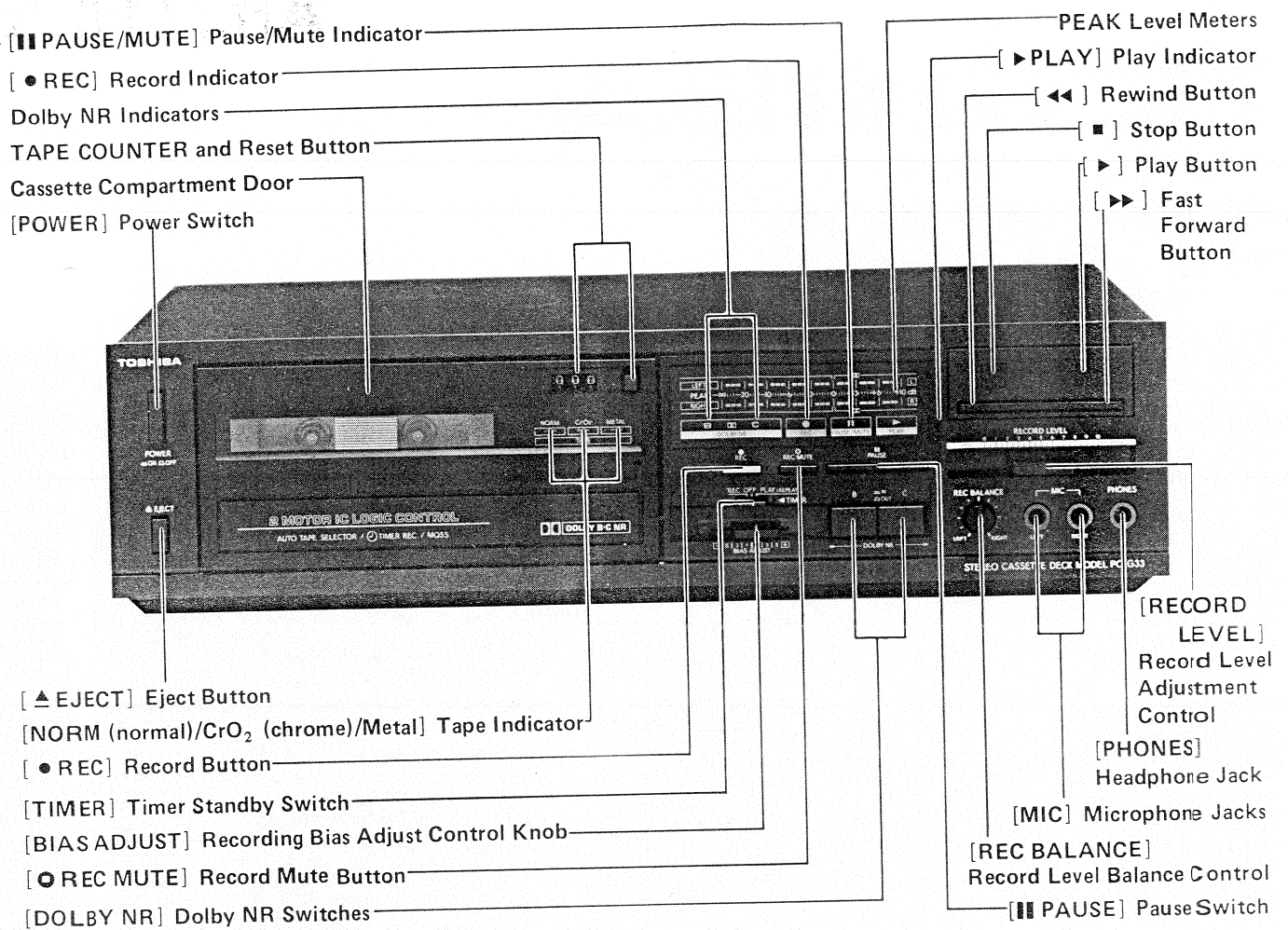


Figure 1

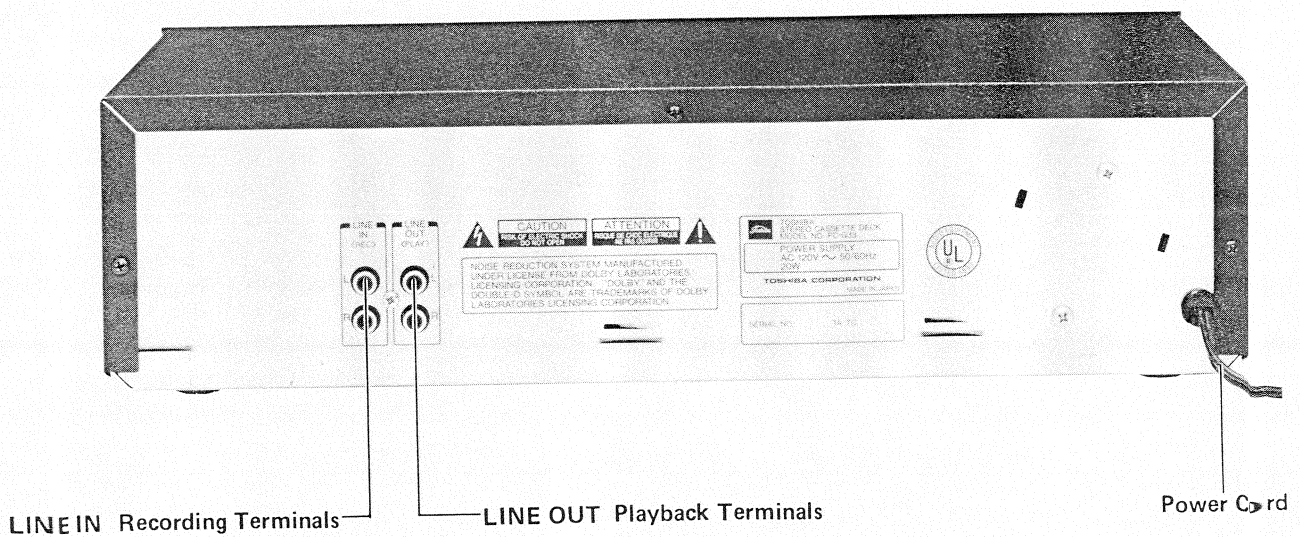


Figure 2

2. DISASSEMBLY INSTRUCTIONS

TOP COVER REMOVAL

1. Remove two screws (A) ($3\phi \times 8\text{mm}$) from each side of top cover and three screws (B) ($3\phi \times 8\text{mm}$) from rear side of unit, then the top cover can be removed from the unit. (See Figure 3, 4 and 5)

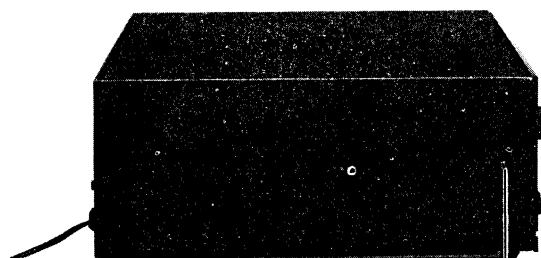


Figure 3

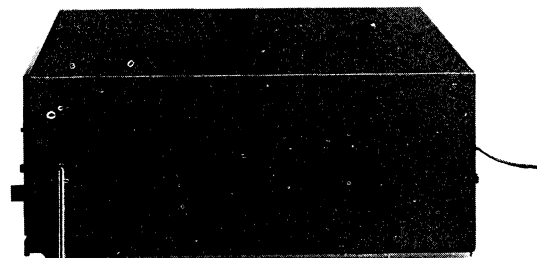


Figure 4

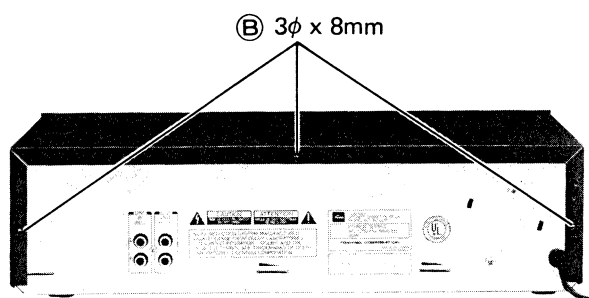


Figure 5

FRONT PANEL ASSEMBLY REMOVAL (with Mechanism Assembly)

1. Remove the top cover. (See Figure 3, 4 and 5)
2. Pull out the REC BALANCE knob from front panel.
3. Remove two screws (C) ($3\phi \times 8\text{mm}$) and (D) ($3\phi \times 16\text{mm}$). (See Figure 6)
4. Remove one screw (E) ($3\phi \times 8\text{mm}$) then the front panel assembly can be removed from the unit. (See Figure 6)

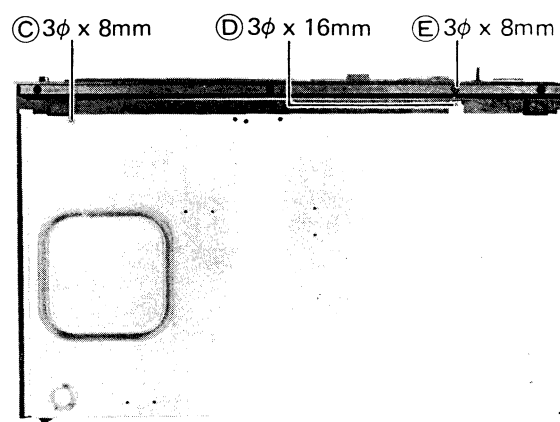


Figure 6

MECHANISM ASSEMBLY REMOVAL

1. Remove the front panel.
2. Remove four screws (F) ($3\phi \times 18\text{mm}$) then the mechanism assembly can be removed from the front panel assembly. (See Figure 7)

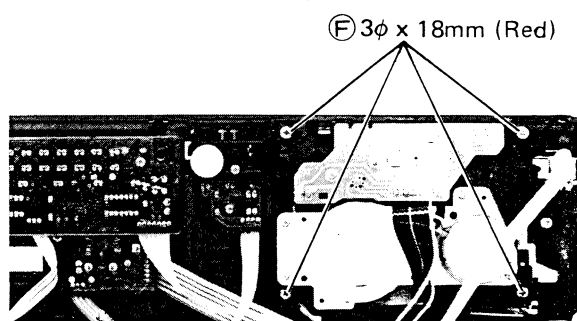


Figure 7

3. BLOCK DIAGRAM

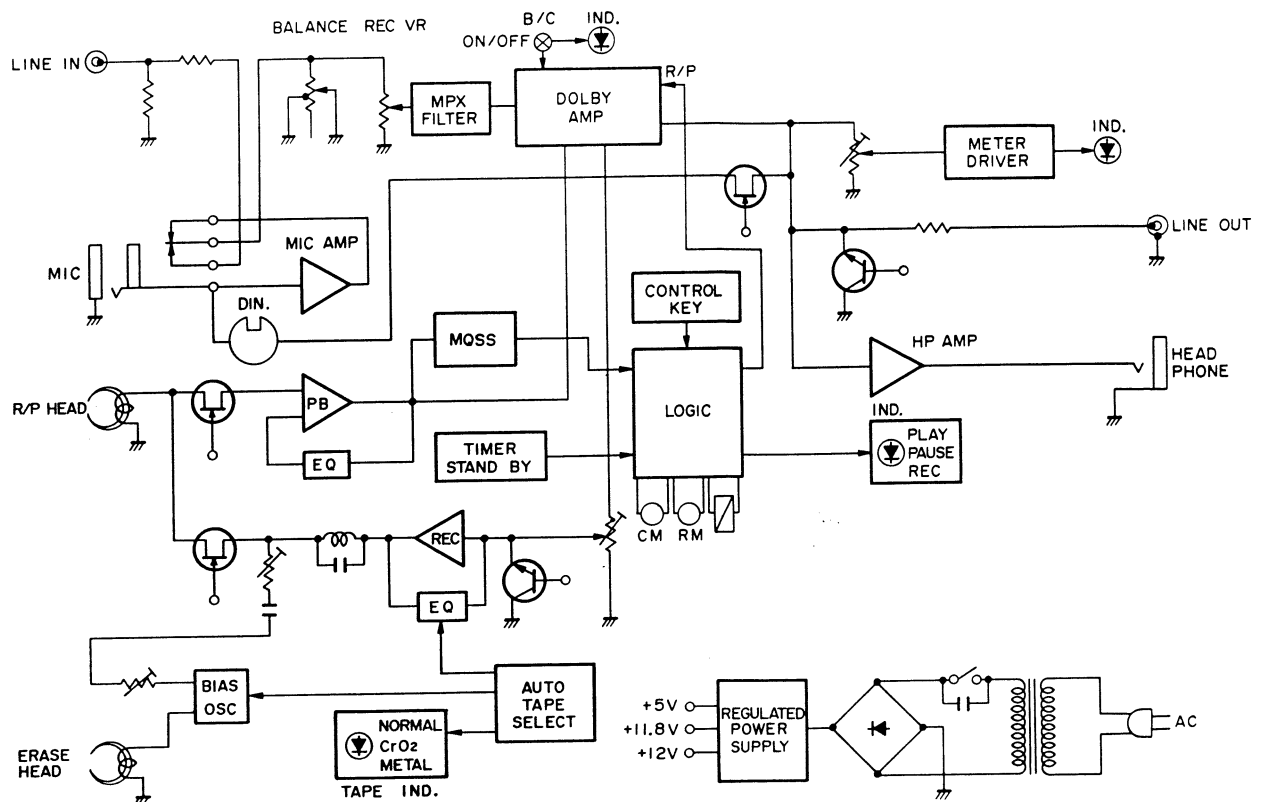


Figure 8

4. ADJUSTMENTS

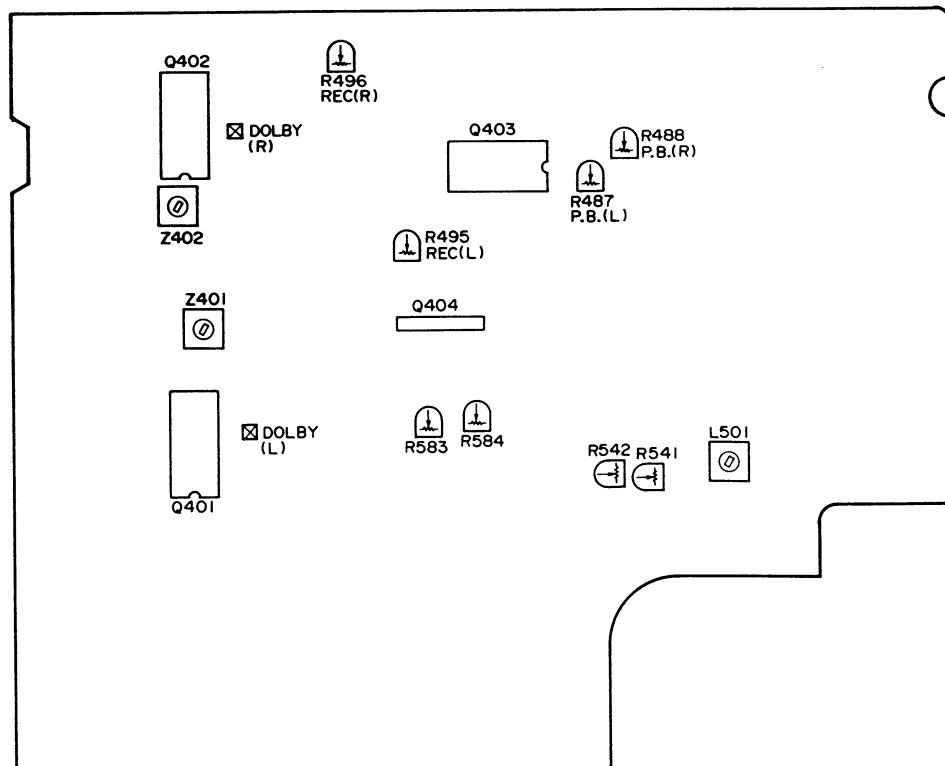


Figure 9

5. ELECTRICAL PARTS LOCATIONS

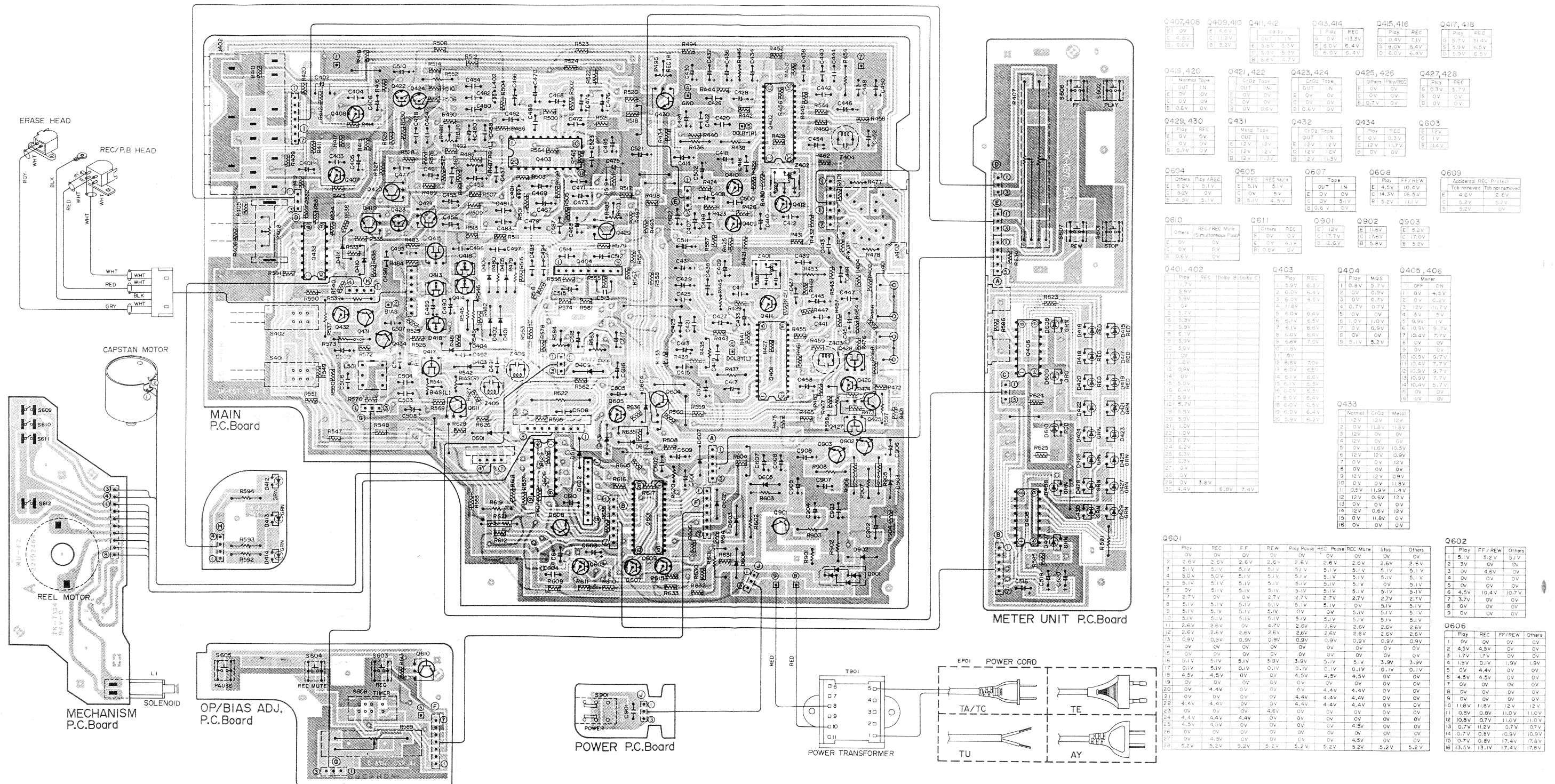
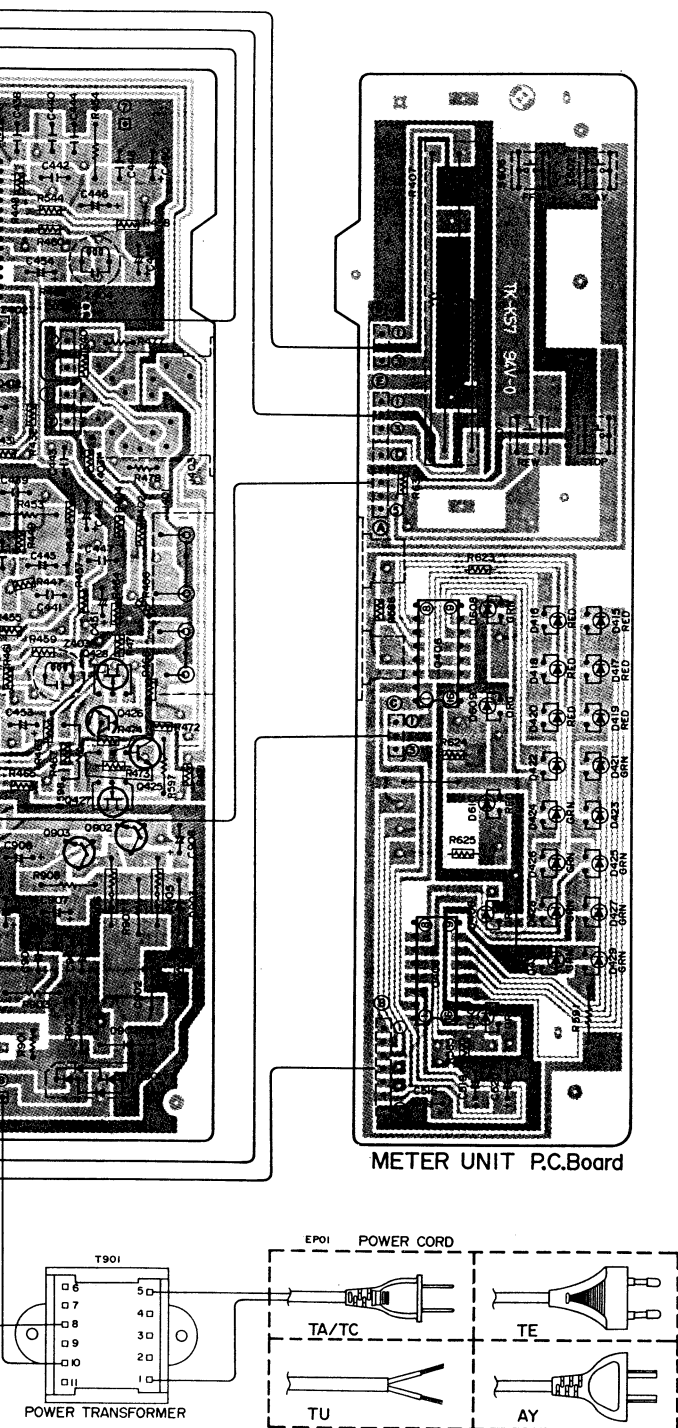


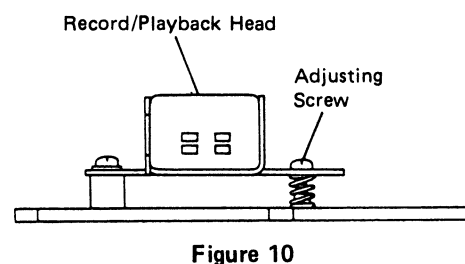
Figure 17



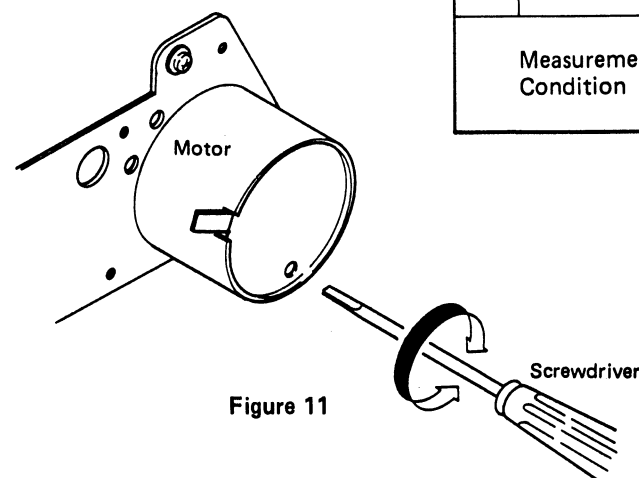
TEST EQUIPMENTS

1. VTVM (Vacuum Tube Voltmeter)
2. Signal Generator
3. Resistance Attenuator
4. Screwdriver
5. Test Tapes:
MTT-111 (Speed 3 kHz – 5 dB)
MTT-114 (Azimuth 10 kHz)
MTT-150 (Dolby 400 Hz Modulation)
AC-512 (Chrome Tape)
6. Frequency Counter

1. HEAD AZIMUTH ADJUSTMENT



2. TAPE SPEED



3. PLAYBACK SENSITIVITY ADJUSTMENT

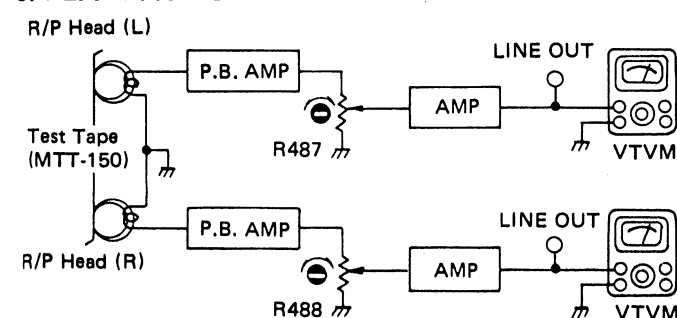


Figure 12

No.	Adjustment Item	Test Value	Test Tape	Rec. Balance Control R408	Rec. Level Control R407	Switch Position			Adjustable Parts	Test Point	Input Frequency	Connection	Remarks
						TAPE	NR	INPUT					
1	Head Azimuth Adjustment	Maximum	MTT-114	—		NOR	OUT		Adjusting Screw	LINE OUT	—	VTVM (LINE OUT)	Apply a lock paint after adjustment.
2	Tape Speed	3000 ±30 Hz	MTT-111	—		NOR	OUT		Internal Semifixed VR of Motor	LINE OUT	—	Frequency Counter (LINE OUT)	Take-up beginning of tape.
3	Playback Sensitivity Adjustment	500 ± 10mV	MTT-150	—		NOR	OUT		R487, 488	LINE OUT	—	See Figure 12	
4	Bias Oscillator Adjustment	85 kHz	—	—		METAL	OUT		L501	R541 or R542	—	See Figure 13	REC
5	Line Input Sensitivity Adjustment	350 ± 10mV	—	Center	Adjustment	CrO ₂	OUT	LINE IN	REC-VR R407 BAL-VR R408	LINE OUT	–20 dB	See Figure 14	Do not vary REC-VR after adjustment.
6	Rec/PB Frequency Adjustment	0 ± 1 dB	AC-512	Center	Adjustment	CrO ₂	OUT	LINE IN	R541, 542	LINE OUT	400 Hz 10 kHz –40 dB	See Figure 15	Variation of 10 kHz to 400 Hz.
7	Rec/PB Sensitivity Adjustment	Monitor Output	AC-512	Center	Adjustment	CrO ₂	OUT	LINE IN	R495, 496	LINE OUT	400 Hz –20 dB	See Figure 16	Monitor Output: 350 mV, (Reference Value)
8	LED Meter Level Adjustment	—	MTT-150	—	—	CrO ₂	OUT		R583, 584	—	—		Playback test tape (MTT-150) and adjust until +3 dB LED (RED) light up.

Measurement Condition

- Power Supply: TE: 220V, TU/AY = 240V, TA, TC = 120V
- Input: 0 dB 1V rms • LINE IN (Input Impedance): 600 ohms
- LINE OUT (Load Impedance): 47K ohm • Test Point Load Impedance: Non Load.

4. BIAS OSCILLATOR ADJUSTMENT

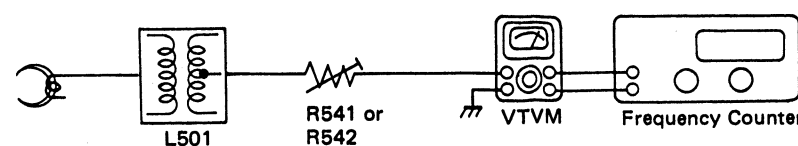


Figure 13

5. LINE INPUT SENSITIVITY ADJUSTMENT

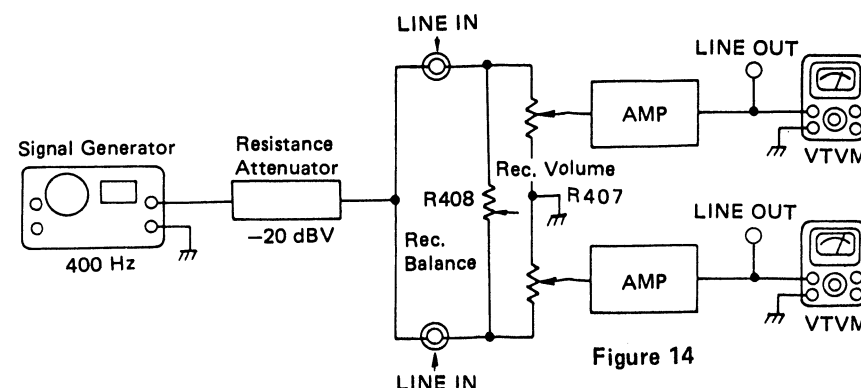


Figure 14

6. RECORD/PLAYBACK FREQUENCY ADJUSTMENT

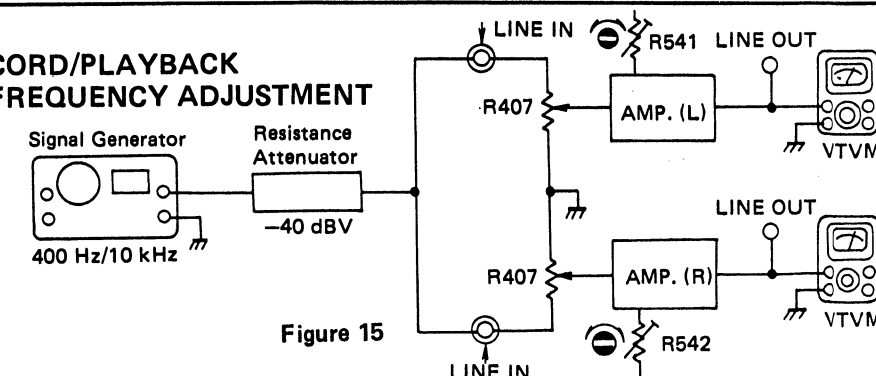


Figure 15

7. RECORD/PLAYBACK SENSITIVITY ADJUSTMENT

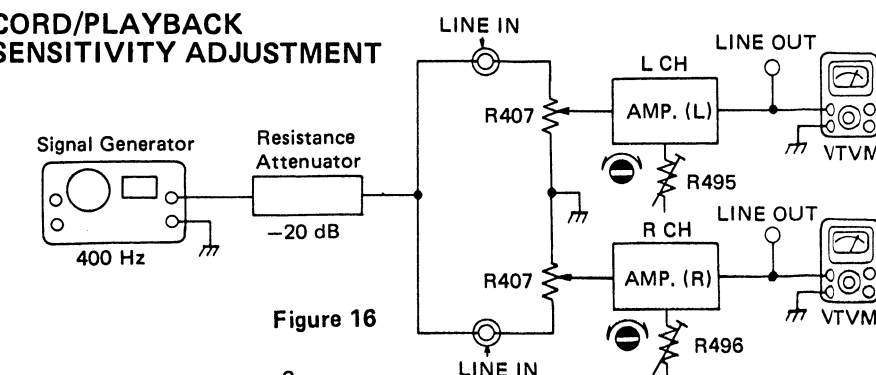


Figure 16

TS

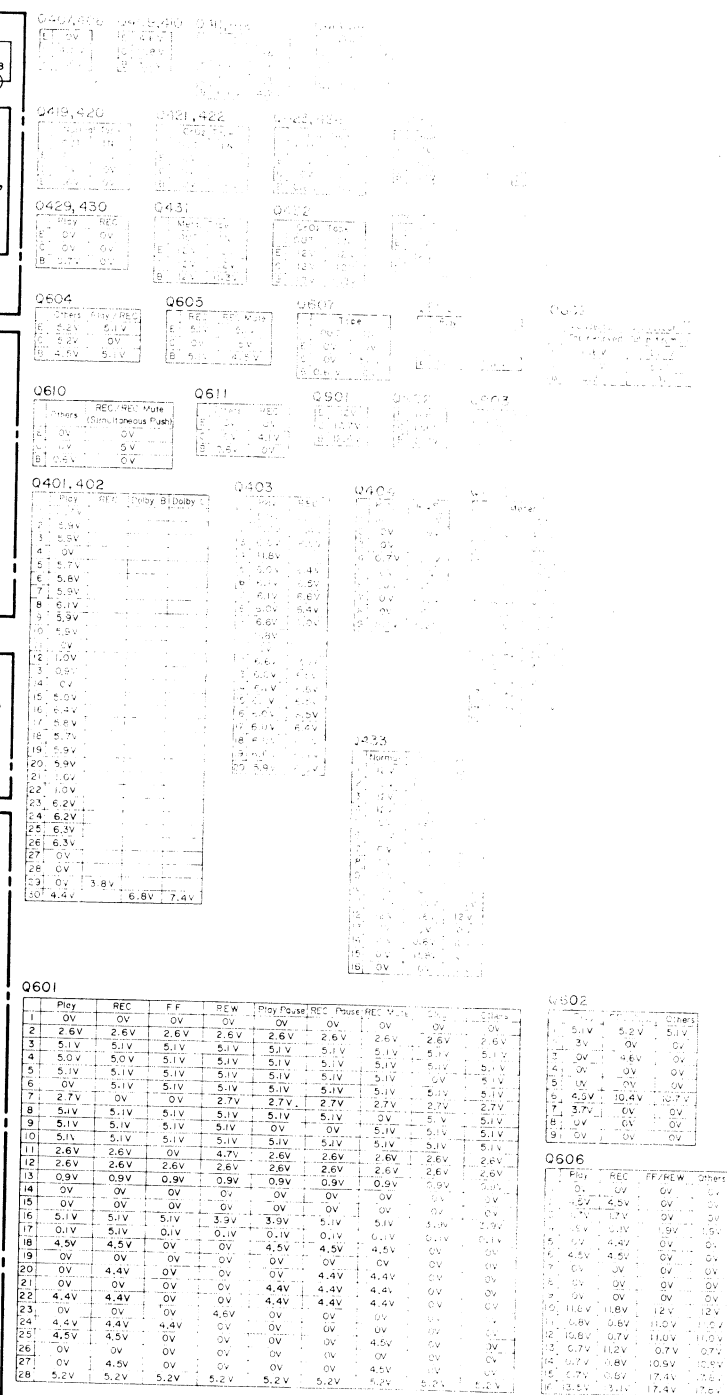

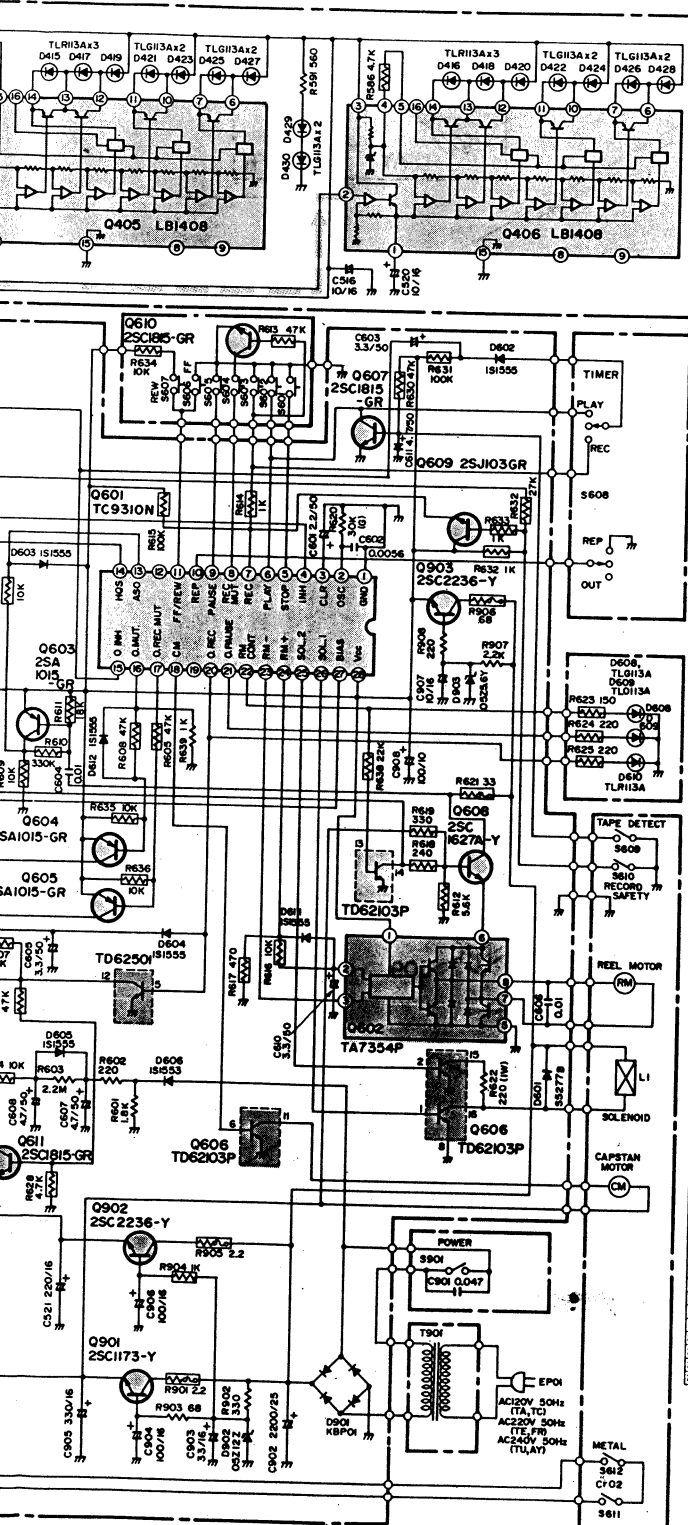


Figure 18 The  mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

ATIC DIAGRAM



Q407,408	Q409,410	Q411,412	Q413,414	Q415,416	Q417,418
E 0V C 4.6V B 0.6V	E 4.6V C 11.8V B 5.2V	OUT IN E 5.9V 5.3V C 5.9V 5.3V B 6.6V 4.7V	Play REC E 0V 0V C 0V 0V B 0.6V 0.6V	Play REC E 0V 0V C 0V 0V B 0.6V 0.6V	Play REC E 0V 0V C 0V 0V B 0.6V 0.6V
Q419,420	Q421,422	Q423,424	Q425,426	Q427,428	Q429,430
Normal Tape OUT IN E 0V 0V C 0V 0V B 0.6V 0.6V	CrOz Tape OUT IN E 0V 0V C 0V 0V B 0.6V 0.6V	CrOz Tape OUT IN E 0V 0V C 0V 0V B 0.6V 0.6V	Others OUT IN E 0V 0V C 0V 0V B 0.6V 0.6V	Others OUT IN E 0V 0V C 0V 0V B 0.6V 0.6V	Others OUT IN E 0V 0V C 0V 0V B 0.6V 0.6V
Q429,430	Q431	Q432	Q434	Q436	Q438
Play REC E 0V 0V C 0V 0V B 5.7V 0V	Metrol Tape OUT IN E 12V 12V C 12V 12V B 12V 11.3V	CrOz Tape OUT IN E 12V 12V C 12V 12V B 12V 11.3V	CrOz Tape OUT IN E 12V 12V C 12V 12V B 12V 11.3V	CrOz Tape OUT IN E 12V 12V C 12V 12V B 12V 11.3V	CrOz Tape OUT IN E 12V 12V C 12V 12V B 12V 11.3V
Q604	Q605	Q607	Q608	Q609	Q610
Others Play/REC E 0V 0V C 5.2V 5V B 4.5V 5.1V	REC REC Mute E 5.1V 5.1V C 0V 5V B 5.1V 4.5V	CrOz Tape OUT IN E 0V 0V C 0V 0V B 0.6V 0.6V	Play REC E 0V 0V C 0V 0V B 0.6V 0.6V	Play REC E 0V 0V C 0V 0V B 0.6V 0.6V	Play REC E 0V 0V C 0V 0V B 0.6V 0.6V
Q610	Q611	Q901	Q902	Q903	Q904
Others REC REC Mute (Simultaneous Push) E 0V 0V C 0V 5V B 0.6V 0V	Others REC E 0V 0V C 0V 4.1V B 0.6V 0V	E 12V C 17.6V B 12.6V	E 11.6V C 17.6V B 5.9V	E 2.2V C 17.0V B 5.9V	E 2.2V C 17.0V B 5.9V
Q401,402	Q403	Q404	Q405,406	Q433	Q434
Play REC Dolby B Dolby C 1 11.7V 2 5.9V 3 5.9V 4 0V 5 5.7V 6 5.8V 7 5.9V 8 6.1V 9 5.9V 10 5.9V 11 0V 12 1.0V 13 0.9V 14 0V 15 5.0V 16 6.4V 17 5.8V 18 5.7V 19 5.9V 20 5.9V 21 1.0V 22 1.0V 23 6.2V 24 6.2V 25 6.3V 26 6.3V 27 0V 28 0V 29 0V 30 4.4V 3.8V 6.8V 7.4V	Play REC 1 5.9V 6.3V 2 6.0V 6.2V 3 6.0V 6.5V 4 11.8V 5 5.7V 6 5.0V 6.4V 7 6.1V 6.5V 8 6.1V 6.6V 9 6.0V 6.4V 10 6.6V 7.0V 11 1.8V 12 6.6V 7.0V 13 6.0V 6.5V 14 6.1V 6.6V 15 6.1V 6.5V 16 6.0V 6.5V 17 6.0V 6.4V 18 6.0V 6.4V 19 6.0V 6.4V 20 5.9V 6.3V	Play MGC 1 0.6V 5.7V 2 0V 0.6V 3 0V 0.7V 4 0.7V 0.7V 5 0V 0V 6 1.0V 1.0V 7 0V 0.6V 8 0V 0V 9 5.1V 5.2V	Play REC 1 12V 9V 12V 2 0V 0.6V 0.6V 3 12V 0V 0V 4 12V 0V 0V 5 0V 1.6V 1.6V 6 0V 1.2V 1.2V 7 0V 2V 12V 8 0V 0V 0V 9 12V 12V 12V 10 0V 0V 1.6V 11 0.5V 1.9V 1.4V 12 12V 0.6V 12V 13 0V 0V 0V 14 12V 0.6V 12V 15 0V 11.8V 0V 16 0V 0V 0V	Normal CrOz CrOz 1 12V 9V 12V 2 0V 0.6V 0.6V 3 12V 0V 0V 4 12V 0V 0V 5 0V 1.6V 1.6V 6 0V 1.2V 1.2V 7 0V 2V 12V 8 0V 0V 0V 9 12V 12V 12V 10 0V 0V 1.6V 11 0.5V 1.9V 1.4V 12 12V 0.6V 12V 13 0V 0V 0V 14 12V 0.6V 12V 15 0V 11.8V 0V 16 0V 0V 0V	Play REC 1 12V 9V 12V 2 0V 0.6V 0.6V 3 12V 0V 0V 4 12V 0V 0V 5 0V 1.6V 1.6V 6 0V 1.2V 1.2V 7 0V 2V 12V 8 0V 0V 0V 9 12V 12V 12V 10 0V 0V 1.6V 11 0.5V 1.9V 1.4V 12 12V 0.6V 12V 13 0V 0V 0V 14 12V 0.6V 12V 15 0V 11.8V 0V 16 0V 0V 0V
Q601	Q602	Q603	Q604	Q605	Q606
Play REC FF REW 1 0V 0V 0V 0V 2 2.6V 2.6V 2.6V 2.6V 3 5.1V 5.1V 5.1V 5.1V 4 5.0V 5.0V 5.1V 5.1V 5 5.1V 5.1V 5.1V 5.1V 6 0V 5.1V 5.1V 5.1V 7 2.7V 0V 0V 2.7V 8 5.1V 5.1V 5.1V 5.1V 9 5.1V 5.1V 5.1V 5.1V 10 5.1V 5.1V 5.1V 5.1V 11 2.6V 2.6V 0V 4.7V 12 2.6V 2.6V 2.6V 2.6V 13 0.9V 0.9V 0.9V 0.9V 14 0V 0V 0V 0V 15 0V 0V 0V 0V 16 5.1V 5.1V 5.1V 3.9V 17 0.1V 5.1V 0.1V 0.1V 18 4.5V 4.5V 0V 4.5V 19 0V 0V 0V 0V 20 0V 4.4V 0V 0V 21 0V 0V 0V 0V 22 4.4V 4.4V 0V 4.4V 23 0V 0V 0V 4.6V 24 4.4V 4.4V 4.4V 0V 25 4.5V 4.5V 0V 0V 26 0V 0V 0V 0V 27 0V 4.5V 0V 0V 28 5.2V 5.2V 5.2V 5.2V	Play REC Pause REC Mute CrOz Others 1 0V 0V 0V 0V 0V 0V 2 0V 0V 2.6V 2.6V 2.6V 2.6V 3 5.1V 5.1V 5.1V 5.1V 5.1V 5.1V 4 5.0V 5.0V 5.1V 5.1V 5.1V 5.1V 5 5.1V 5.1V 5.1V 5.1V 5.1V 5.1V 6 0V 5.1V 5.1V 5.1V 5.1V 5.1V 7 2.7V 0V 0V 2.7V 2.7V 2.7V 8 5.1V 5.1V 5.1V 5.1V 5.1V 5.1V 9 5.1V 5.1V 5.1V 5.1V 5.1V 5.1V 10 5.1V 5.1V 5.1V 5.1V 5.1V 5.1V 11 2.6V 2.6V 0V 4.7V 5.1V 5.1V 12 2.6V 2.6V 2.6V 2.6V 2.6V 2.6V 13 0.9V 0.9V 0.9V 0.9V 0.9V 0.9V 14 0V 0V 0V 0V 0V 0V 15 0V 0V 0V 0V 0V 0V 16 5.1V 5.1V 5.1V 3.9V 5.1V 3.9V 17 0.1V 5.1V 0.1V 0.1V 0.1V 0.1V 18 4.5V 4.5V 0V 4.5V 0.1V 0.1V 19 0V 0V 0V 0V 0V 0V 20 0V 4.4V 0V 0V 0V 0V 21 0V 0V 0V 0V 0V 0V 22 4.4V 4.4V 0V 4.4V 0V 0V 23 0V 0V 0V 4.6V 0V 0V 24 4.4V 4.4V 4.4V 0V 0V 0V 25 4.5V 4.5V 0V 0V 0V 0V 26 0V 0V 0V 0V 0V 0V 27 0V 4.5V 0V 0V 0V 0V 28 5.2V 5.2V 5.2V 5.2V 5.2V 5.2V	Play REC FF REW 1 0V 0V 0V 0V 2 4.5V 4.5V 0V 0V 3 1.7V 1.7V 0V 0V 4 1.9V 0.1V 1.9V 1.9V 5 0V 0V 0V 0V 6 4.5V 4.5V 0V 0V 7 0V 0V 0V 0V 8 0V 0V 0V 0V 9 0V 0V 0V 0V 10 11.8V 11.8V 12V 12V 11 0.8V 0.8V 11.0V 11.0V 12 10.8V 0.7V 11.0V 11.0V 13 0.7V 11.2V 0.7V 0.7V 14 0.7V 0.8V 10.9V 10.9V 15 6.7V 0.8V 17.4V 17.6V 16 13.5V 13.1V 17.4V 17.6V	Play REC FF REW Others 1 0V 0V 0V 0V 2 4.5V 4.5V 0V 0V 3 1.7V 1.7V 0V 0V 4 1.9V 0.1V 1.9V 1.9V 5 0V 0V 0V 0V 6 4.5V 4.5V 0V 0V 7 0V 0V 0V 0V 8 0V 0V 0V 0V 9 0V 0V 0V 0V 10 11.8V 11.8V 12V 12V 11 0.8V 0.8V 11.0V 11.0V 12 10.8V 0.7V 11.0V 11.0V 13 0.7V 11.2V 0.7V 0.7V 14 0.7V 0.8V 10.9V 10.9V 15 6.7V 0.8V 17.4V 17.6V 16 13.5V 13.1V 17.4V 17.6V	Play REC FF REW Others 1 0V 0V 0V 0V 2 4.5V 4.5V 0V 0V 3 1.7V 1.7V 0V 0V 4 1.9V 0.1V 1.9V 1.9V 5 0V 0V 0V 0V 6 4.5V 4.5V 0V 0V 7 0V 0V 0V 0V 8 0V 0V 0V 0V 9 0V 0V 0V 0V 10 11.8V 11.8V 12V 12V 11 0.8V 0.8V 11.0V 11.0V 12 10.8V 0.7V 11.0V 11.0V 13 0.7V 11.2V 0.7V 0.7V 14 0.7V 0.8V 10.9V 10.9V 15 6.7V 0.8V 17.4V 17.6V 16 13.5V 13.1V 17.4V 17.6V	Play REC FF REW Others 1 0V 0V 0V 0V 2 4.5V 4.5V 0V 0V 3 1.7V 1.7V 0V 0V 4 1.9V 0.1V 1.9V 1.9V 5 0V 0V 0V 0V 6 4.5V 4.5V 0V 0V 7 0V 0V 0V 0V 8 0V 0V 0V 0V 9 0V 0V 0V 0V 10 11.8V 11.8V 12V 12V 11 0.8V 0.8V 11.0V 11.0V 12 10.8V 0.7V 11.0V 11.0V 13 0.7V 11.2V 0.7V 0.7V 14 0.7V 0.8V 10.9V 10.9V 15 6.7V 0.8V 17.4V 17.6V 16 13.5V 13.1V 17.4V 17.6V

7-1. EXPLODED VIEW CABINET

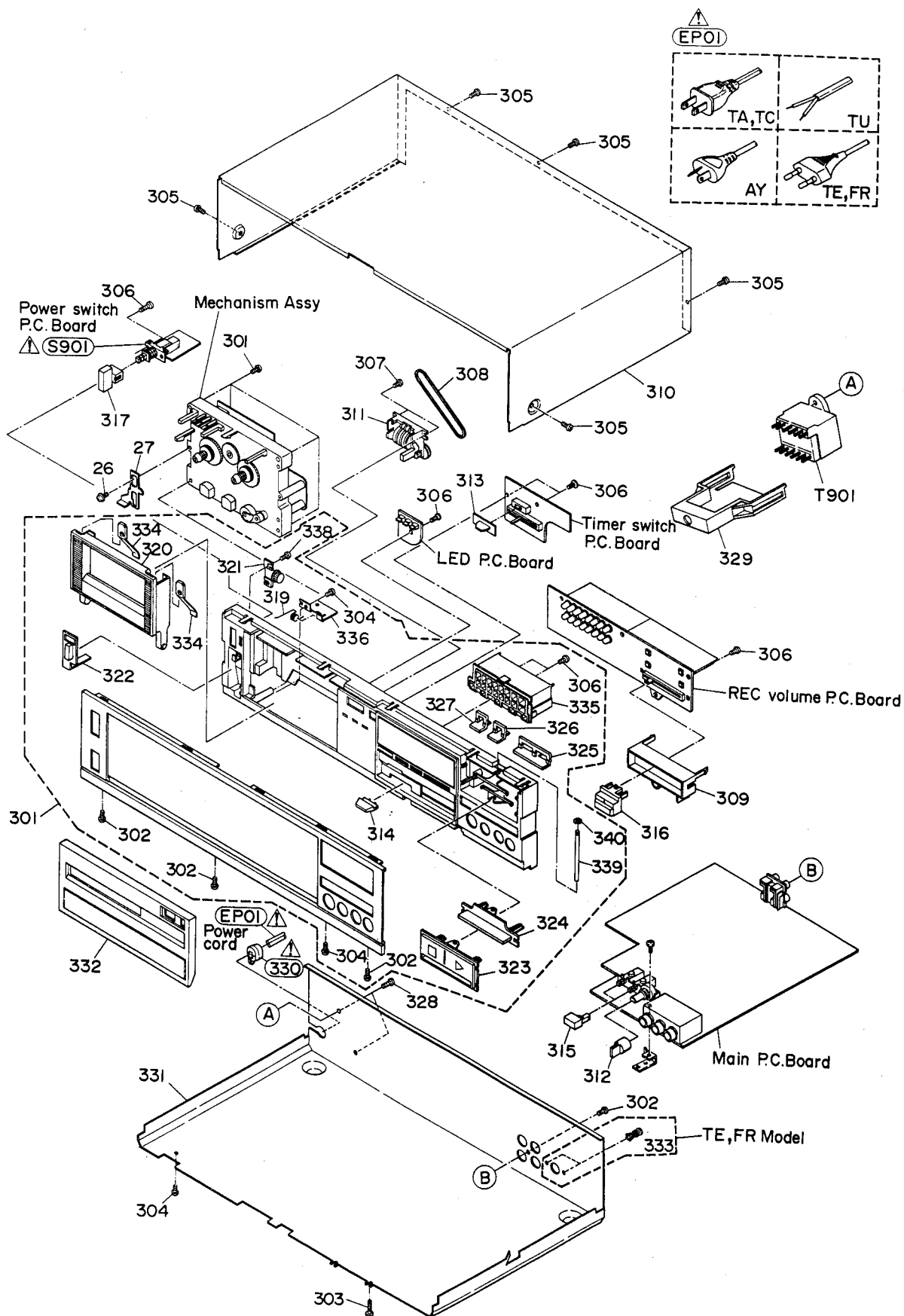


Figure 19

NOTE: Parts exclude in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering they items.

7-2. CABINET PARTS LIST

CAUTION:

The Δ mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
301	22707806	Screw, 2DTBID 3 ϕ x 25mm
302	22707826	Screw, 2DTBID 3 ϕ x 10mm (TC, TE, FR, TU, AY)
302	22708033	Screw, 2DTBID 3 ϕ x 10mm (K-TA, K-TC, K-TE)
303	22707835	Screw, 2DTBID 3 ϕ x 16mm
304	22707842	Screw, 2DTBID 3 ϕ x 8mm
305	22707886	Screw, 2DTBID 3 ϕ x 10mm (TC, TE, FR, TU, AY)
305	22707885	Screw, 2DTBID 3 ϕ x 8mm (K-TA, K-TC, K-TE)
306	22708207	Screw, 2DTBID 2.6 ϕ x 10mm
307	22708208	Screw, 2DTPAN 2.6 ϕ x 10mm
308	25759006	Belt, Tape Counter
309	25844284	Decoration, Slide Volume
310	25864241	Top Cover (TC, TE, FR, TU, AY)
310	25864328	Top Cover (K-TA, K-TC, K-TE)
311	25873284	Tape Counter
312	25886009	Knob, Rec Balance (TC, TE, FR, TU, AY)
312	25886124	Knob, Rec Balance (K-TA, K-TC, K-TE)
313	25886221	Knob, Timer (TC, TE, FR, TU, AY)
313	25886313	Knob, Timer (K-TA, K-TC, K-TE)
314	25886222	Knob, Bias Adjust (TC, TE, FR, TU, AY)
314	25886314	Knob, Bias Adjust (K-TA, K-TC, K-TE)
315	25886223	Knob, Dolby B/C (TC, TE, FR, TU, AY)
315	25886315	Knob, Dolby B/C (K-TA, K-TC, K-TE)
316	25886224	Knob, Record Balance (TC, TE, FR, TU, AY)
316	25886316	Knob, Record Balance (K-TA, K-TC, K-TE)
317	22824454	Knob, Power (TC, TE, FR, TU, AY)
317	22824465	Knob, Power (K-TA, K-TC, K-TE)
318	25819590	Panel Ass'y, Front (TC, TE, TU, AY)
318	25819600	Panel Ass'y, Front (FR)
318	25899001	Panel Ass'y, Front (K-TA)

Symbol No.	Part No.	Description
318	25899002	Panel Ass'y, Front (K-TC, K-TE)
319	25775280	Spring, Cassette Eject
320	25832923	Cassette Holder
321	25883246	Damper, Cassette Holder
322	25886032	Knob, Eject (TC, TE, FR, TU, AY)
322	25886123	Knob, Eject (K-TA, K-TC, K-TE)
323	25886231	Knob, Play (TC, TE, FR, TU, AY)
323	25886317	Knob, Play (K-TA, K-TC, K-TE)
324	25886232	Knob, FF/Rewind (TC, TE, FR, TU, AY)
324	25886318	Knob, FF/Rewind (K-TA, K-TC, K-TE)
325	25886233	Knob, Pause (TC, TE, FR, TU, AY)
325	25886319	Knob, Pause (K-TA, K-TC, K-TE)
326	25886234	Knob, Mute (TC, TE, FR, TU, AY)
326	25886320	Knob, Mute (K-TA, K-TC, K-TE)
327	25886235	Knob, Rec
328	22707871	Screw, 2DTBID 4 ϕ x 12mm
329	25854502	Cover, Power Transformer
Δ 330	25844322	Bush, Power Cord (TA, TC, TE, TU, AY)
Δ 330	25845528	Bush, Power Cord (FR)
331	25864371	Jack Plate (TC, K-TA, K-TC)
331	25864349	Jack Plate (TE)
331	25864368	Jack Plate (TU, AY)
331	25864370	Jack Plate (FR)
332	25883336	Cassette Cover Ass'y (TC, TE, TU, AY)
332	25883494	Cassette Cover Ass'y (FR)
332	25883495	Cassette Cover Ass'y (K-TA, K-TC, K-TE)
333	22705022	Rivet, 3 ϕ x 5.5mm
334	25779391	Spring, Cassette Holder

8-1. EXPLODED VIEW MECHANISM

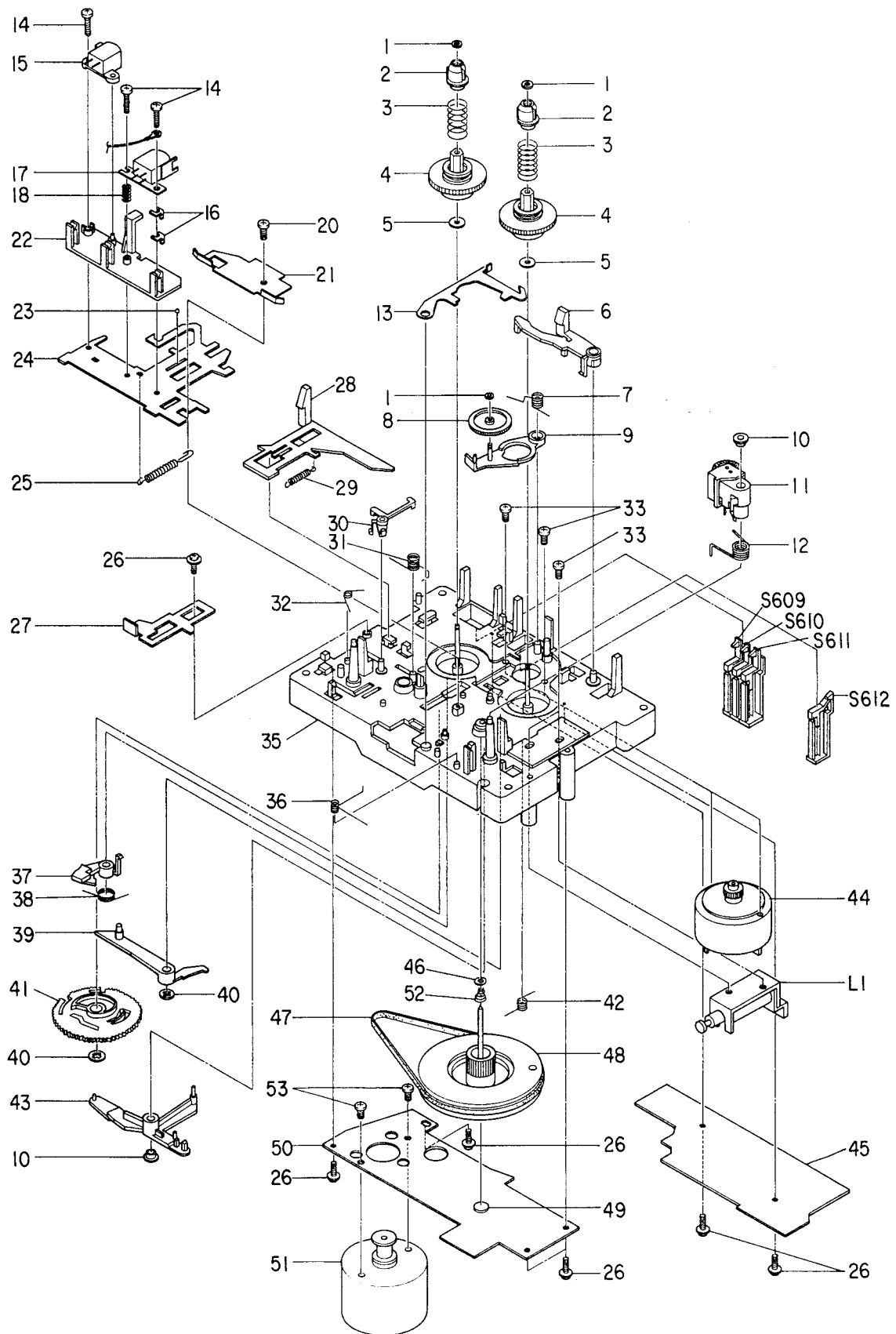


Figure 20 NOTE: Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

8-2. MECHANISM PARTS LIST

Symbol No.	Part No.	Description
1	25766050	Washer, 1.6 ϕ , Reel Drum
2	25754436	Reel Collar
3	25777392	Spring, Reel Drum
4	25754469	Reel Drum
5	25764597	Washer, Reel Drum
6	25784145	Holder Lever
7	25778161	Spring, Holder Lever
8	25756408	Gear, Transfer
9	25791787	Take-up Gear Ass'y
10	25783260	Bush
11	25717600	Pressure Roller Ass'y
12	25778159	Spring, Pressure Roller
14	22707507	Screw, BID Hd, 2 ϕ x 8mm
15	22218255	Erase Head
16	25735266	Spacer, Adjust
17	22217428	Record/Playback Head
18	25777137	Spring, Head Azimuth
20	22708040	Screw, BID Hd, 2 ϕ x 5mm, Tapping
21	25779427	Spring, Hold
22	25781283	Head Base
23	25757132	Steel Ball
25	25776721	Spring, Assist
26	22707361	Screw, TPAN Hd, 2.6 ϕ x 8mm

Symbol No.	Part No.	Description
28	25784148	Slider, Eject
29	25776722	Spring, Eject Slider
30	25784146	Lever, Lock
31	25778158	Spring, Slider
32	25778160	Spring, Lock
33	25707475	Screw, BID Hd, 2.6 ϕ x 4mm
35	25791715	Mechanism Chassis Ass'y
36	25778164	Spring, MQS
37	25784147	Lever, Play Lock
38	25778163	Spring, Play Lock
39	25784150	Lever, Play
40	20798033	Ring
41	25756409	Cam Gear, Main
42	25778162	Spring, Cam Lock
43	25784151	Lever, Cam Lock
44	25791714	Reel Motor Ass'y
45	22192469	P.C. Board, Mechanism
46	25764486	Washer, Flywheel
47	25755600	Belt, Main
48	25797007	Flywheel Ass'y
49	25766024	Washer, Thrust
51	25791713	Main Motor Ass'y
52	25777071	Spring, Flywheel
53	22701389	Screw, BID, Hd, 2.6 ϕ x 3mm

9. ELECTRICAL PARTS LIST

CAUTION:

The Δ mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
TRANSISTORS, IC'S & DIODES		
Q401, 402	22117220	IC, HA12058NT
Q403	B0356360	IC, TA7639P
Q404	B0325320	IC, TA7341P
Q405, 406	22117479	IC, LB1408
Q407, 408	A6317480	Transistor, 2SC1815NEW-BL
Q409, 410	A6317460	Transistor, 2SC1815NEW-GR
Q411, 412	A6534060	Transistor, 2SA1015-GR
Q413, 414	A6044630	Transistor, 2SK246-GR
Q415, 416	A6044630	Transistor, 2SK246-GR
Q417, 418	A6040910	Transistor, 2SJ103-GR
Q419, 420	A6317460	Transistor, 2SC1815NEW-GR
Q421, 422	A6317460	Transistor, 2SC1815NEW-GR
Q423, 424	A6317460	Transistor, 2SC1815NEW-GR

Symbol No.	Part No.	Description
Q425, 426	A6342200	Transistor, 2SC2878A
Q427, 428	A6040910	Transistor, 2SJ103-GR (TE, FR, K-TE)
Q429, 430	A6342200	Transistor, 2SC2878A
Q431	A6533240	Transistor, 2SA966-Y
Q432	A6534040	Transistor, 2SA1015-GR
Q433	B0470494	IC, TC4049BP
Q434	A6314470	Transistor, 2SC1627A-Y
Q601	B0413159	IC, TC9310N-060
Q602	B0325460	IC, TA7354P
Q603	A6534060	Transistor, 2SA1015-GR
Q604, 605	A6534060	Transistor, 2SA1015-GR
Q606	B0275005	IC, TD62103P
Q607	A6317460	Transistor, 2SC1815NEW-GR

Symbol No.	Part No.	Description
Q608	A6314470	Transistor, 2SC1627A-Y
Q609	A6317460	Transistor, 2SC1815NEW-GR
Q610	A6317460	Transistor, 2SC1815NEW-GR
Q611	A6317460	Transistor, 2SC1815NEW-GR
Q901	A677164A	Transistor, 2SC1173-Y
Q902	A6325540	Transistor, 2SC2236-Y
Q903	A6325540	Transistor, 2SC2236-Y
D401, 402	A7246601	Diode, 1S1553
D403, 404	A7246601	Diode, 1S1553
D405, 406	A7246601	Diode, 1S1553
D407, 408	A8605666	Diode, TLG113A
D409	A7246703	Diode, 1S1555
D410, 411	A7246703	Diode, 1S1555
D412, 413	A8606660	Diode, TLG208
D414	A8606660	Diode, TLG208
D415, 416	A8600607	Diode, TLR113A
D417, 418	A8600607	Diode, TLR113A
D419, 420	A8600607	Diode, TLR113A
D421, 422	A8605666	Diode, TLG113A
D423, 424	A8605666	Diode, TLG113A
D425, 426	A8605666	Diode, TLG113A
D427, 428	A8605666	Diode, TLG113A
D429, 430	A8605666	Diode, TLG113A
D431	A7246703	Diode, 1S1555
D601	A7978380	Diode, S5277B
D602	A7246703	Diode, 1S1555
D603	A7246703	Diode, 1S1555
D604	A7246703	Diode, 1S1555
D605	A7246703	Diode, 1S1555
D606	A7246601	Diode, 1S1553
D608	A8605666	Diode, TLG113A
D609	A8611730	Diode, TLO113A
D610	A8600607	Diode, TLR113A
D611	A7246703	Diode, 1S1555
D612	A7246703	Diode, 1S1555
D901	22115737	Diode, KBP01 (TA, TC, TE, FR, AY)
D901	22115875	Diode, KBP01-E (TU)
D902	A7110412	Diode, 05Z12-Z
D903	A7110017	Diode, 10Z5.6-Y
ELECTRICAL PARTS		
J401-1, 2	22163887	Jack, US-4P
J402-1, 2	22163948	Jack Microphone/Headphone
J403	22167908	DIN Socket, 5P (TE, FR, K-TE)

Symbol No.	Part No.	Description
S401, 402	22196453	Push Switch, Dolby B/C
S601, 602	22196490	Key Switch, Stop/Play
S603, 604	22196490	Key Switch, Rec./Rec Mute
S605	22196490	Key Switch, Pause
S606, 607	22196490	Key Switch, FF/Rewind
S608	22195566	Slide Switch, Timer
S609	22196436	Leaf Switch, Tape Detect
S610	22196436	Leaf Switch, Record Safety
S611	22196436	Leaf Switch, CrO ₂
S612	22196437	Leaf Switch, Metal
△ S901	22196058	Push Switch, Power
L1	22147269	Solenoid
L401, 402	22232278	Coil, 8.2mH
L501	22235231	Coil, Bias Oscillator
Z401, 402	22153278	Dolby Filter
Z403, 404	22153277	Dolby Filter, C
Z405, 406	22153229	Coil, Bias Trap
△ T901	22224155	Transformer, Power (TA)
△ T901	22224163	Transformer, Power (TC)
△ T901	22224115	Transformer, Power (TE, FR)
△ T901	22224157	Transformer, Power (TU, AY)
△ EP01	22176644	Power Cord (TA, TC)
△ EP01	22176642	Power Cord (TE, FR)
△ EP01	22176641	Power Cord (TU)
△ EP01	22176588	Power Cord (AY)
CAPACITORS		
G = ±2%, J = ±5%, K = ±10%, Z = -20 + 80%		
ABBREVIATIONS: CD = Ceramic Disk, EL = Electrolytic		
MY = Mylar, PF = Plastic Film		
C401, 402	22488339	EL, 3.3mfd, 50V
C403, 404	22349221	CD, 220pF, 50V, K
C405, 406	22488339	EL, 3.3mfd, 50V
C407, 408	22488478	EL, 0.47mfd, 50V
C409, 410	22485100	EL, 10mfd, 16V
C411, 412	22371332	MY, 3300pF, 50V, J
C413, 414	22488109	EL, 1mfd, 50V
C415, 416	22349221	CD, 220pF, 50V, K
C417, 418	22483221	EL, 220mfd, 10V
C419, 420	22321315	PF, 0.033mfd, 10V, G
C421, 422	22371103	MY, 0.01mfd, 50V, J

Symbol No.	Part No.	Description
C423, 424	22488479	EL, 4.7mfd, 50V
C425, 426	22371183	MY, 0.018mfd, 50V, J
C427, 428	22480006	EL, 0.33mfd, 50V
C429, 430	22488158	EL, 0.15mfd, 50V
C431, 432	22488478	EL, 0.47mfd, 50V
C433, 434	22480008	EL, 0.68mfd, 50V
C435, 436	22488479	EL, 4.7mfd, 50V
C437, 438	22361470	CD, 47pF, 50V, J
C439, 440	22371562	MY, 5600pF, 50V, J
C441, 442	22371822	MY, 8200pF, 50V, J
C443, 444	22371472	MY, 4700pF, 50V, J
C445, 446	22488479	EL, 4.7mfd, 50V
C447, 448	22371823	MY, 0.082mfd, 50V, J
C449, 450	22488158	EL, 0.15mfd, 50V
C451, 452	22488478	EL, 0.47mfd, 50V
C453, 454	22488479	EL, 4.7mfd, 50V
C455, 456	22485100	EL, 10mfd, 16V
C457, 458	22362101	CD, 100pF, 50V, K
C459, 460	22485330	EL, 33mfd, 16V
C461, 462	22488479	EL, 4.7mfd, 50V
C463, 464	22371103	MY, 0.01mfd, 50V, J
C465, 466	22488339	EL, 3.3mfd, 50V
C467, 468	22480003	EL, 0.1mfd, 50V
C469, 470	22485100	EL, 10mfd, 16V
C471, 472	22349102	CD, 1000pF, 50V, K
C473, 474	22488478	EL, 0.47mfd, 50V
C475, 476	22485100	EL, 10mfd, 16V
C477, 478	22471223	MY, 0.022mfd, 50V, J
C479, 480	22371103	MY, 0.01mfd, 50V, J
C481, 482	22371103	MY, 0.01mfd, 50V, J
C483, 484	22371153	MY, 0.015mfd, 50V, J
C485	22483101	EL, 100mfd, 10V
C486	22488109	EL, 1mfd, 50V
C487, 488	22349221	CD, 220pF, 50V, K
C489, 490	22488109	EL, 1mfd, 50V
C491, 492	22361180	CD, 18pF, 50V, J
C493, 494	22349471	CD, 470pF, 50V, K
C495, 496	22349681	CD, 680pF, 50V, K
C497, 498	22342473	CD, 0.047mfd, 50V, Z
C499, 500	22349221	CD, 220pF, 50V, K
C501, 502	22485101	EL, 100mfd, 16V
C503, 504	22349221	CD, 220pF, 50V, K
C505	22380271	PF, 6800pF, 200V, J
C506	22371103	MY, 0.01mfd, 50V, J
C507	22371682	MY, 6800pF, 50V, J
C508	22488339	EL, 3.3mfd, 50V
C509	22485330	EL, 33mfd, 50V
C510	22485330	EL, 33mfd, 16V
C511	22488109	EL, 1mfd, 50V
C512	22488339	EL, 3.3mfd, 50V
C513	22342223	CD, 0.022mfd, 50V, Z
C514	22349102	CD, 1000pF, 50V, K

Symbol No.	Part No.	Description
C515	22485100	EL, 10mfd, 16V
C516	22485100	EL, 10mfd, 16V
C517, 518	22488478	EL, 0.47mfd, 50V
C519, 520	22485100	EL, 10mfd, 16V
C521	22485221	EL, 220mfd, 16V
C522	22485330	EL, 33mfd, 16V
C523	22342473	CD, 0.047mfd, 50V, Z
C601	22488229	EL, 2.2mfd, 50V
C602	22371562	CD, 5600pF, 50V, J
C603	22488339	EL, 3.3mfd, 50V
C604	22342103	CD, 0.01mfd, 50V, Z
C605	22488339	EL, 3.3mfd, 50V
C606	22342103	CD, 0.01mfd, 50V, Z
C607, 608	22488479	EL, 4.7mfd, 50V
C610	22488339	EL, 3.3mfd, 50V
C611	22488479	EL, 4.7mfd, 50V
C901	22342473	CD, 0.047mfd, 50V, Z
C902	22486222	EL, 2200mfd, 25V
C903	22485330	EL, 33mfd, 16V
C904	22485101	EL, 100mfd, 16V
C905	22485331	EL, 330mfd, 16V
C906	22485101	EL, 100mfd, 16V
C907	22485100	EL, 10mfd, 16V
C908	22483101	EL, 100mfd, 10V
RESISTORS		
1. Resistors are Fixed Carbon Film $\frac{1}{4}W$, $\pm 5\%$, unless otherwise noted. K = 1000, M = 1000000. 2. PRC is short for the printed resistor circuit. IF replacement of the resistor in PRC is required, please use the substitutional fixed carbon film resistor of $\frac{1}{4}W$, $\pm 5\%$ according to the following list.		
R401, 402	22545223	22K ohm (PRC)
R403, 404	22545104	100K ohm (PRC)
R405, 406	22545103	10K ohm (PRC)
R407	22657337	100K ohm x 2, Variable, REC Level
R408	22620066	250K ohm x 2, Variable, REC Balance
R409, 410	22545472	4.7K ohm (PRC)
R411, 412	22545393	39K ohm (PRC)
R413, 414	22545224	220K ohm (PRC)
R415, 416	22545562	5.6K ohm (PRC)
R417, 418	22545330	33 ohm (PRC)
R419, 420	22545473	47K ohm (PRC)

Symbol No.	Part No.	Description
R421, 422	22545154	150K ohm (PRC)
R423, 424	22545332	3.3K ohm (PRC)
R425, 426	22545332	3.3K ohm (PRC)
R427, 428	22545562	5.6K ohm (PRC)
R429, 430	22545334	330K ohm (PRC)
R431, 432	22545223	22K ohm (PRC)
R433, 434	22545103	10K ohm (PRC)
R435, 436	22545332	3.3K ohm
R437, 438	22545822	8.2K ohm
R439, 440	22540730	24K ohm (PRC)
R441, 442	22550491	6.2K ohm (PRC)
R443, 444	22545823	82K ohm (PRC)
R445, 446	22550495	2M ohm
R447, 448	22545472	4.7K ohm (PRC)
R449, 450	22545103	10K ohm (PRC)
R451, 452	22545683	68K ohm (PRC)
R453, 454	22545473	47K ohm
R455, 456	22550491	6.2K ohm (PRC)
R457, 458	22545823	82K ohm (PRC)
R459, 460	22545332	3.3K ohm (PRC)
R461, 462	22545102	1K ohm (PRC)
R463, 464	22545223	22K ohm (PRC)
R465, 466	22545152	1.5K ohm (PRC)
R467, 468	22545102	1K ohm (PRC)
R471, 472	22545102	1K ohm (PRC)
R473, 474	22545472	4.7K ohm (PRC)
R475, 476	22545562	5.6K ohm (PRC)
R477, 478	22545471	470 ohm (TA, TC, TU, AY) (PRC)
R479, 480	22545106	10M ohm
R481, 482	22545103	10K ohm (PRC)
R483, 484	22545224	220K ohm (PRC)
R485, 486	22545274	270K ohm (PRC)
R487, 488	22658793	500 ohm, Semi-fixed
R489, 490	22545272	2.7K ohm (PRC)
R491, 492	22545123	12K ohm (PRC)
R493, 494	22545223	22K ohm (PRC)
R495, 496	22658801	50K ohm, Semi-fixed
R497, 498	22545472	4.7K ohm (PRC)
R499, 500	22545104	100K ohm (PRC)
R501, 502	22545273	27K ohm (PRC)
R503, 504	22545272	2.7K ohm (PRC)
R505, 506	22545151	150 ohm (PRC)
R507, 508	22545123	12K ohm (PRC)
R509, 510	22545153	15K ohm (PRC)
R511, 512	22540694	5.1K ohm (PRC)
R513, 514	22545822	8.2K ohm (PRC)
R515, 516	22545123	12K ohm (PRC)
R517, 518	22545223	22K ohm (PRC)
R519, 520	22545333	33K ohm (PRC)
R521, 522	22545181	180 ohm (PRC)
R523, 524	22545332	3.3K ohm (PRC)
R525, 526	22545224	220K ohm (PRC)
R527, 528	22545332	3.3K ohm (PRC)

Symbol No.	Part No.	Description
R529, 530	22545224	220K ohm (PRC)
R531, 532	22545333	33K ohm (PRC)
R533, 534	22545333	33K ohm (PRC)
R535, 536	22545333	33K ohm (PRC)
R537	22547101	100 ohm, 1/2W
R538	22545102	1K ohm (PRC)
R539	22545221	220 ohm
R540	22545332	3.3K ohm (PRC)
R541, 542	22658803	200K ohm, Semi-fixed
R543, 544	22545471	470 ohm (PRC)
R545, 546	22545106	10M ohm
R547, 548	22545681	680 ohm (PRC)
R549	22540694	5.1K ohm (PRC)
R550	22545123	12K ohm (PRC)
R551	22545822	8.2K ohm (PRC)
R552	22545221	220 ohm
R553	22545332	3.3K ohm (PRC)
R554	22545103	10K ohm (PRC)
R555	22545102	1K ohm (PRC)
R556	22545104	100K ohm (PRC)
R557	22545103	10K ohm (PRC)
R558	22545183	18K ohm (PRC)
R559	22545332	3.3K ohm (PRC)
R560	22545473	47K ohm (PRC)
R561	22545103	10K ohm (PRC)
R562	22545103	10K ohm (PRC)
R563	22545334	330K ohm (PRC)
R564	22545682	6.8K ohm (PRC)
R565	22545682	6.8K ohm (PRC)
R567	22545103	10K ohm (PRC)
R569	22545152	1.5K ohm (PRC)
R570	22545473	47K ohm (PRC)
R571	22545472	4.7K ohm (PRC)
R572	22545680	68 ohm (PRC)
R573	22500169	4.7 ohm, Fusible, J
R574	22545183	18K ohm (PRC)
R575, 576	22545223	22K ohm (PRC)
R577, 578	22545682	6.8K ohm
R579	22545154	150K ohm (PRC)
R581	22545103	10K ohm (PRC)
R583, 584	22658798	10K ohm, Semi-fixed
R585, 586	22545472	4.7K ohm (PRC)
R589	22657323	20K ohm, Variable, Bias Adjust
R590	22545104	100K ohm (PRC)
R591	22545561	560 ohm
R592, 593	22545681	680 ohm
R594	22545681	680 ohm
R595	22545103	10K ohm (PRC)
R597, 598	22545106	10M ohm (TE)
R601	22545182	1.8K ohm
R602	22545221	220 ohm
R603	22545225	2.2M ohm
R604	22545103	10K ohm (PRC)
R605	22545473	47K ohm (PRC)
R606	22545103	10K ohm (PRC)

Symbol No.	Part No.	Description
R607	22545222	2.2K ohm (PRC)
R608	22545473	47K ohm (PRC)
R609	22545103	10K ohm (PRC)
R610	22545334	330K ohm (PRC)
R611	22545183	18K ohm (PRC)
R612	22545562	5.6K ohm (PRC)
R613	22545473	47K ohm (PRC)
R614	22545102	1K ohm (PRC)
R615	22545104	100K ohm (PRC)
R616	22545103	10K ohm (PRC)
R617	22545471	470 ohm (PRC)
R618	22545221	240 ohm (PRC)
R619	22545331	330 ohm
R620	22550497	30K ohm, G, 1/4W
R621	22500177	33 ohm, Fusible, J
R622	22570311	220 ohm, 2W
R623	22545151	150 ohm (PRC)
R624, 625	22545221	220 ohm (PRC)
R626	22545473	47K ohm (PRC)
R627	22545471	470 ohm (PRC)
R628	22545472	4.7K ohm (PRC)
R629	22545473	47K ohm (PRC)
R630	22545473	47K ohm (PRC)
R631	22545104	100K ohm (PRC)
R632	22545102	1K ohm (PRC)
R633	22545102	1K ohm (PRC)
R634	22545103	10K ohm (PRC)
R635, 636	22545103	10K ohm (PRC)
R637	22545222	2.2K ohm (PRC)
R638	22545223	22K ohm (PRC)
R639	22545102	1K ohm
R901	22500272	2.2 ohm, Fusible, J
R902	22545331	330 ohm
R903	22545680	68 ohm
R904	22545102	1K ohm (PRC)
R905	22500167	2.2 ohm, Fusible, J
R906	22500150	68 ohm, Fusible, J
R907	22545222	2.2K ohm
R908	22545221	220 ohm

Symbol No.	Part No.	Description
ACCESSORIES		
AC01	22164775	PIN Plug Cord
AC02	22904025	Owner's Manual (TE)
AC02	22904165	Owner's Manual (TU, AY)
AC02	22904167	Owner's Manual (FR)
AC02	22904168	Owner's Manual (TA)
AC02	22904169	Owner's Manual (TC)
AC03	22990983	Head Cleaner

TOSHIBA CORPORATION

1-1, SHIBAURA, 1-CHOME, MINATO-KU, TOKYO 105, JAPAN